

REMARKS/ARGUMENTS

Applicants have carefully reviewed the Examiner's Office Action dated October 27, 2005, in which the Examiner objected claims 9 and 10 because of informalities; rejected claims 1 and 2 under 35 U.S.C. 102(b) as being anticipated by Marsh(U.S. 6,135,620); rejected claims 3-7 and 9-10 under 35 U.S.C. 103(a) as being unpatentable over Marsh in view of Kawasaki(U.S. 2003/0030378).

Amendments to the Claims

To overcome the 35 U.S.C. 102(b) and 103(a) rejections, claim 1 has been cancelled and claim 8 has been amended to include all the limitations of the independent claims. Further, claims 11-26 have been added, and claims 2-4, 7, and 9 have been amended to directly depend on the added claim 11.

All of the amendments are fully supported by the original disclosure of this application and therefore do not constitute the introduction of any new matter into this case. Claim 8 has previously been indicated as allowable.

Claim Rejections under 35 U.S.C. 102(b)

The rejection of claims 1 and 2 as being anticipated by Marsh (U.S. 6,135,620) has been carefully considered but is most respectfully traversed insofar as it may be prospectively applied to new independent claims 11 and 14, and the claims that depend therefrom. Claim 8 has already been indicated as allowable.

Newly added independent claim 11 is directed to an electron tube including a vessel, a primary linear member installed in the vessel, an electrode disposed in the vessel, a first auxiliary linear member and a second auxiliary linear member disposed at different heights to interpose the primary linear member therebetween, and a plurality of fixing members, formed at a single substrate constituting a part of the vessel, for fixing end portions of the first auxiliary and the second auxiliary linear member thereto, wherein two end portions of each auxiliary linear member are fixed to two different fixing members, respectively.

With regard to the electron tube of claim 11, both ends of each of the damper D1, D2 (first and second auxiliary linear members) are fixed to different conductive spacer pads SP (fixing members) made of an aluminum wire such as a bonding wire (page 10 lines 14-16, and FIGS. 1A-1C).

In contrast, Marsh only discloses that both ends of each mounting means(74) are fixed to a single base(38). Therefore, Marsh does not disclose the auxiliary linear members of which both ends are fixed at different fixing members, respectively.

The second added independent claim 14 is directed to an electron tube including a vessel, a primary linear member, an electrode, a first auxiliary linear member, a second auxiliary linear member and a plurality of fixing members, wherein the primary linear member and the auxiliary linear members are disposed parallel to the single substrate.

With regard to the electron tube of claim 14, the pair of linear dampers D1, D2 symmetrically arranged with respect to the filament F are hung tightly in a

direction intersecting the filaments F (page 9 lines 7-10 and FIGS. 1A to 1B). The vertical position of the damper D1 is defined by the height of the bottom portion of the fixing portion SP1, while that of the damper D2 is defined by the height of a top portion SP3 thereof (page 11 lines 9-12 and FIG. 1A). The vertical position of the filament F is determined by the diameter of the Al wire (page 11 lines 20-21). The spacer pad SP is fixedly attached to the front substrate 11 by ultrasonic-bonding the Al wire. When the spacer pad SP is fixed, the top portion SP3 has a height of 380 μm and the bottom portions of the fixing portions SP1, SP2 have a height of 230 μm . The height of the spacer pad 114 fixed to the front substrate 11, that is, the vertical position of the filament F is set to be 320 μm (page 13 lines 25-26, and page 14 lines 1-5 and FIGS. 1A-1C). Therefore, the primary linear member and the auxiliary linear members are disposed parallel to the substrate 11.

In contrast, the mounting means(74) of Marsh is perpendicular to the inside surface(82) at which the mounting means are fixed. Therefore, Marsh does not disclose the claimed primary linear member and the auxiliary linear members which are parallel to the single substrate at which the plurality of fixing members are formed.

Accordingly, it is most respectfully requested that the rejection based on the Marsh patent be withdrawn.

With regard to the dependent claims 2-7, 9-10, and 12-13 of claim 11, and the dependent claims 15-23 of claim 14 are allowable for the same reasons of claims 11 and 14.

The added claims 15-22 correspond to the dependent claims 2-7 and 9-10, and claim 12 is disclosed in the same section of the description as claim 14. Claims 13 and 23 are directed to an electron tube further including a plurality of fixing members, formed at the single substrate, for fixing end portions of the primary linear member thereto. That is, both ends of the filament F are fixed by fixing members different from those for the auxiliary members (page 11 lines 15-18 and FIGS. 1A-1C). Therefore, the added dependent claims 12, 13, and 15-23 are fully supported by the original disclosure of this application.

Claim Rejections under 35 U.S.C. 103(a)

The rejection of claims 3-7 and 9-10 under 35 U.S.C. 103(a) as being unpatentable over Marsh in view of Kawasaki has been carefully considered but is most respectfully traversed.

This rejection is respectfully traversed on the grounds that the Marsh and Kawasaki patents fail to disclose or suggest the auxiliary members of the present invention. Therefore, the combination of Marsh and Kawasaki fails to teach or even suggest the auxiliary linear member of claims 11 and 14, and cannot achieve the advantage of the present invention that the electron tube of claims 11 and 14 reduce a space for fixing one or more pairs of auxiliary linear members, the number of process and member therefor, and the number of wiring thereof and terminal for extracting the wirings to an outside by fixing one or more pairs of auxiliary linear members to a common fixing member or separated fixing members formed on a same substrate.

Applicants wish to direct the Examiner's attention to basic requirement of a prima facie case of obviousness as set forth in the MPEP §2143. This section states that to establish a prima facie case of obviousness, three basic criteria first must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine the references teachings. Second, there must be a reasonable expectation of success. Finally, the prior art references (or references when combined) must teach or suggest all the claim limitations.

Further, the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). Section 2143.03 states that all claim limitations must be taught or suggested by the prior art. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). "All words in a Claim must be considered in judging the patentability of that claim against the prior art." In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). If an independent claim is non-obvious under 35 U.S.C. 103, then any claim depending therefrom is non-obvious. In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1998).

Because not all words in the rejected claims are met by a proper combination of the Marsh and Kawasaki patents, it is most respectfully requested that the rejection be withdrawn.

It is also believed that claims 2-7, 9-10, 12-13, and 15-23 directly depending on claim 11 or claim 14 are allowable for the same reasons indicated with respect to the claims 11 and 14, and further because of the additional features recited therein which, when taken alone and/or in combination with the features recited in the claims 11 and 14, remove the invention defined therein further from the disclosures made in the cited references.

Allowable claim 8 has been amended to include all the limitations of the independent claims and correct minor errors. Added dependent claims 24-26 are also allowable since claims 24-26 directly depend on claim 8. The features of claims 24-26 are fully supported by the original disclosure of this application for the same reasons of claim 11, 14, and 13.

CONCLUSION

Applicants believe that this is a full and complete response to the Office Action. For the reasons discussed above, applicant now respectfully submits that all of the pending claims are in complete condition for allowance. Accordingly, it is respectfully requested that the Examiner's rejections be withdrawn; and that the claims 2-26 be allowed in their present form. If the Examiner feels that any issues that remain require discussions, he is kindly invited to contact applicants' undersigned attorney to resolve the issues.

Should the Examiner require or consider it advisable that the specification,

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claims and/or drawings be further amended or corrected in formal respects, in order to place the case in condition for final allowance, then it is respectfully requested that such amendment or correction be carried out by Examiner's Amendment and the case be passed to issue.

Alternatively, should the Examiner feel that a personal discussion might be helpful in advancing this case to allowance, the Examiner is invited to telephone the undersigned at any time.

Respectfully submitted,
BACON & THOMAS, PLLC

A handwritten signature in black ink, appearing to read 'B. Urcia', followed by a long horizontal line extending to the right.

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